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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/416,715	10/13/1999	MANFRED LEMBKE	10191/1201	6509

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EXAMINER
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ART UNIT	PAPER NUMBER
1773	15

DATE MAILED: 09/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-15

Office Action Summary	Application N .	Applicant(s)	
	09/416,715	LEMBKE ET AL.	
	Examin r	Art Unit	
	Ramsey Zacharia	1773	

-- The MAILING DATE f this communication appears n the cover she t with the correspondence address --

Period f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 August 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-6,8-10 and 12-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,8-10 and 12-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. In view of the request for withdrawal of finality filed on August 29, 2002, the Applicants' arguments are persuasive and the finality has been withdrawn. New grounds of rejection are put forth below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 4-6, 8-10, and 12-17 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection. Support for the limitation that the element comprises an outer surface of one of the materials recited in claim 1 could not be found in the disclosure as originally filed.

Claim Rejections - 35 USC § 102

5. Claims 1, 4-6, 8-10, 12, 13, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Gruner at al. (U.S. Patent 4,345,465).

Gruner et al. teach a probe for measuring the rate of flow, temperature, or both of a flowing gas or other fluid that may be used in an internal combustion engine (column 1, lines 5-13). The probe comprises thin sheets of a heat resistant polymer having a hydrophobic coating that is preferably 0.5 μm thick (column 1, lines 35-66). The probe is further composed of metal layers (Figure 1 and column 2, lines 43-47). While a polymer coating covers some of the metal, Gruner et al. explicitly teach that part of the metal layer remain exposed, i.e. on the outer surface (column 3, lines 5-12). The hydrophobic coating may be a polymer of hexafluoropropylene, i.e. a polymeric fluorocarbon resin or fluorine-containing polymer, that is designed to prevent dirt from contaminating the surface (column 3, lines 18-25).

Regarding the limitations of claims 4, 5, and 10, the stability temperature, surface energy, and decomposition temperature are taken to be physical properties of the material. Since Gruner et al. uses a fluorinated polymer for the hydrophobic coating as is done in the instant application, the hydrophobic coating of Gruner et al. is taken to inherently possess the same material properties as that of the instant invention.

Moreover, the hydrophobic coating of Gruner et al. is taken to pass a cross-cut test since it is the same material as used in the instant invention and is designed to act as a protective layer.

Claim Rejections - 35 USC § 103

6. Claims 1, 4-6, 8-10, and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. (U.S. patent 4,606,952) in view of Gruner at al. (U.S. Patent 4,345,465).

Sugimoto et al. teach an automotive fuel hose and fuel pump diaphragm comprising a laminate of a fluororubber inner layer bonded to an outer layer (column 1, lines 9-13).

Sugimoto et al. do not teach the presence of a sensor element as recited in claim 1.

Gruner et al. teach a probe for measuring the rate of flow, temperature, or both of a flowing gas or other fluid that may be used in an internal combustion engine (column 1, lines 5-13). The probe comprises thin sheets of a heat resistant polymer having a hydrophobic coating that is preferably 0.5 μm thick (column 1, lines 35-66). The probe is further composed of metal layers (Figure 1 and column 2, lines 43-47). While a polymer coating covers some of the metal, Gruner et al. explicitly teach that part of the metal layer remain exposed, i.e. on the outer surface (column 3, lines 5-12). The hydrophobic coating may be a polymer of hexafluoropropylene, i.e. a polymeric fluorocarbon resin or fluorine-containing polymer, that is designed to prevent dirt from contaminating the surface (column 3, lines 18-25). The probe is designed to be disposed in a flow channel or duct of a fluid medium (claim 1).

Regarding the limitations of claims 4, 5, and 10, the stability temperature, surface energy, and decomposition temperature are taken to be physical properties of the material. Since Gruner et al. uses a fluorinated polymer for the hydrophobic coating as is done in the instant application, the hydrophobic coating of Gruner et al. is taken to inherently possess the same material properties as that of the instant invention.

Moreover, the hydrophobic coating of Gruner et al. is taken to pass a cross-cut test since it is the same material as used in the instant invention and is designed to act as a protective layer.

One of ordinary skill in the art would be motivated to dispose the probe of Gruner et al. in the fuel hose or pump of Sugimoto et al. to allow for detection of, and subsequent control over, the rate of flow through the hose or pump.

Regarding claim 16, the hose or pump containing the probe reads on a housing for the probe.

Therefore, the inventions of claims 1, 4-6, 8-10, and 12-17 would have been obvious to one of ordinary skill in the art at the time the inventions were made.

Response to Arguments

7. Applicant's arguments filed August 29, 2002 have been fully considered but they are not persuasive.

The Applicant argues that the rejection of claims 1, 4-6, 8-10, 12, 13, and 17 as anticipated by Gruner et al. should be withdrawn because Gruner et al. do not teach a sensor element having an outer surface of at least one of silicon, silicon nitride, silicon dioxide, glass, metal, or ceramic.

This is not persuasive because, while a polymer coating covers some of the metal layer, Gruner et al. explicitly teach that part of the metal layer remain exposed (column 3, lines 5-12). At these exposed areas, the sensor would have an outer layer of metal, thus meeting the limitation added to claim 1.

Regarding the rejection of claims 1, 4-6, 8-10, and 12-17 as obvious over Sugimoto et al.

in view of Gruner et al., the Applicant argues that neither reference teach a sensor element having an outer surface of at least one of silicon, silicon nitride, silicon dioxide, glass, metal, or ceramic. Moreover, the Applicant argues that the references cannot be combined because they are not analogous art.

This is not persuasive for the following reasons. First, as outlined above, Gruner et al. do teach a sensor element wherein at least some of the outer layer is metal. Second, the references do constitute analogous art because they are both in the same field of endeavor. Sugimoto et al. is directed to fuel hose while Gruner et al. is directed to a sensor designed to measure the flow of fuel and to be disposed within a flow channel (see Figure 3 and claims 1 and 2). Both Sugimoto et al. and Gruner et al. are in the same field of endeavor, i.e. fuel systems, and Gruner et al. is specifically designed to be used in the type of flow channel described by Sugimoto et al. Therefore, the references may be combined and the rejection is valid.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (703) 305-0503. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for non after-final correspondences and (703) 872-9311 for after-final correspondences.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

RZ

Ramsey Zacharia

9/5/02

Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700